

## AUTOMATIC SCHEME SELECTION FOR TOOLKIT HEX MESHING

### ABSTRACT OF THE DISCLOSURE

5 A method of and software for automatically determining whether a mesh can be generated by sweeping for a representation of a geometric solid comprising: classifying surface mesh schemes for surfaces of the representation locally using surface vertex types; grouping mappable and submappable surfaces of the representation into chains; computing volume edge types for the representation; recursively traversing surfaces of the representation and grouping the surfaces into source, target, and linking surface lists; and checking traversal direction when traversing onto linking surfaces.

F:\PAPS\Sandia\SD-6594-pap.doc

TOP SECRET